

REMARKS

By the above amendment, independent claims 1 and 16 have been amended to clarify features of the present invention. More particularly, claim 1 recites the feature that the liquid crystal layer is formed of liquid crystal molecules, and a projection light beam, which is incident upon an emergent from the liquid crystal layer through the transparent substrate, is modulated by the liquid crystal molecules in the liquid crystal layer so that the projection light beam is led and reflected within the liquid crystal layer in directions which lie in a plane which is substantially perpendicular to a direction of orientation of the liquid crystal molecules at at least one of the two substrates. Claim 16 recites the feature of two transparent substrates and the liquid crystal layer is formed of liquid crystal molecules, and now sets forth the features that the projection light beam is modulated by the liquid crystal molecules in the liquid crystal layer so that the projection light beam is led within the crystal layer in directions which lie in a plane which is substantially perpendicular to a direction of orientation of the liquid crystal molecules at at least one of the two transparent substrates. Other features of independent claims 1 and 16 have been clarified, with the dependent claims being amended to clarify features thereof in accordance with the language of parent claims 1 and 16. Applicants submit that the recited features of the independent and dependent claims are not disclosed or taught in the cited art, as will become clear from the following discussion.

The rejection of claims 1, 9 - 12, 14 - 16, 24 - 29 and 32 - 38 under 35 USC 102(e) as being anticipated by Nakagaki et al (US Patent No. 6,049,410); the rejection of claims 3 - 4, 13, 18 - 19 and 30 - 31 under 35 USC 103(a) as being unpatentable over Nakagaki et al, US Patent No. 6,049,410; and the rejection of claims 5 - 8 and 20 - 23 under 35 USC 103(a) as being unpatentable over Nakagaki

et al, US Patent No. 6,049,410, in view of Kitagishi (JP 07-318861); such rejections are traversed insofar as they are applicable to the present claims and reconsideration and withdrawal of the rejections are respectfully requested.

As to the requirements to support a rejection under 35 USC 102, reference is made to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that anticipation under 35 USC §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. As noted by the court, if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if the element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

In applying Nakagaki et al to the claimed invention, the Examiner refers to Fig. 10 and the accompanying text "which discloses a reflective light crystal light-valve can be used in projector (col. 1, ln. 11) comprising a liquid crystal panel (5) a hologram element (e.g., holographic color filter 30), projection lens (inherently formed in the projector), wherein a projection light beam is incident upon and emergent from the liquid crystal layer as claimed (see figure 10 and Summary of the Invention)." Irrespective of the contentions by the Examiner, applicants submit that Nakagaki et al fails to disclose the cited features of independent claims 1 and 16 in the sense of 35 USC 102. More particularly, assuming arguendo that the liquid

crystal panel 5 includes liquid crystal molecules, there is no disclosure or teaching of the orientation of the liquid crystal molecules, and in particular, the feature of claim 1 that the projection light beam is modulated by the liquid crystal molecules in a liquid crystal layer so that the projection light beam is led and reflected within the liquid crystal layer in directions which lie in a plane which is substantially perpendicular to a direction of orientation of the liquid crystal molecules at at least one of the two substrates, or the feature of claim 16 that the projection light beam is modulated by the liquid crystal molecules in the liquid crystal layer so that the projection light beam is led within the liquid crystal layer in directions which lie in a plane which is substantially perpendicular to a direction or orientation of the liquid crystal layer at at least one of the two transparent substrates. Applicants submit there is no disclosure in the sense of 35 USC 103 or teaching in the sense of 35 USC 103 of the aforementioned recited features in Nakagaki et al. Further, as shown in Fig. 10 of Nakagaki et al, a P-polarized component of the incident light beam in Nakagaki et al is emerged at the time when the incident light beam comes at a holographic color filter 30. Applicants note that Fig. 11 of Nakagaki et al discloses a transmission liquid crystal panel 31. Further, applicants note that independent claims 1 and 16 recite the feature that a direction of polarization of the incident light beam upon the liquid crystal layer is substantially perpendicular or parallel to the direction of the orientation of the liquid crystal molecules, and hereagain, applicants submit that there is no disclosure or teaching such features. Accordingly, applicants submit that independent claim 1 and independent claim 16 recite features not disclosed or taught by Nakagaki et al in the sense of 35 USC 102 or 35 USC 103 and claims 1 and 16 and the dependent claims thereof patentably distinguish over Nakagaki et al and should be considered allowable.


With respect to the dependent claims, applicants submit that the dependent claims recite further features, which when considered in conjunction with the parent claims, further patentably distinguish over Nakagaki et al. Moreover, whether or not Kitagishi discloses incident light is approximately the same as a Brewster angle for polarizing and light separating efficiency, applicants submit that Kitagishi fails to overcome the deficiencies of Nakagaki et al as pointed out above, and this combination fails to provide claimed features of the independent and dependent claims of this application. Accordingly, applicants submit that all claims patentably distinguish over this proposed combination of cited art in the sense of 35 USC 103 and should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that all claims present in this application patentably distinguish over the cited art and should now be in condition for allowance. Accordingly, issuance of an action of favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 500.41256X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

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